Am Feb 14 1877

Life Association of America
St. Louis, Dec 19th 1877

Dr. Geo. J Engelmann,

Dear Sir,

I had my attention drawn, this Summer, to the subject of "Pear Blight" which has been so generally treated by writers and papers as a disease, that one scarcely feels disposed to array himself against this belief. Those who have cultivated the Pear exclusively have reached the conclusion that it is best not to break the sod around them, in fact, that for the greatest success, they must be comparatively neglected.

That, by this course of treatment, a greater immunity from pear blight is obtained, would naturally lead us to infer that the so called disease is one of nutrition. Is it so? By the comminution of the soil, the Spring and Summer rains more readily permeate the soil and are taken up by the rootlets — and as a necessary consequence, abundance of material is furnished for the production of new wood. thus increasing the evaporating surface — the hot Summer Sun also takes up more rapidly the moisture from the ground — the new wood failing to obtain a sufficient supply to maintain

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the call made upon it by loss by evaporation —
yields up its life.

Without knowing it to be so, I
should infer from the habit of the Quince, whose
stock is the main support of the Dwarf Pear,
that it sends its feeders neither deep nor far,
The Pear does not spread its branches as a
protecting shield over the ground from which
it draws its sustenance and in this is its own
worst enemy,

By leaving the soil intact, we have
less growth, less demand for water to compensate for
evaporation and less evaporation from the surface
above the roots — and less blight,

The remedy will be found, I think, in heavy
mulching in the spring with straw or hay

I have a row of young dwarf pears which
were more or less affected with blight last summer,
I saved them by trenching and watering,

One in which the leader had shrunk and blighted
for two feet from the top, (noticed in the evening,
under immediate treatment, showed but three inches
death at terminus), next morning, —) the rest
as apparently sound as it had ever been,

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In the matter of "Grape-Rot" I have not seen it suggested that the great loss of heat by radiation may have a great deal to do with it. I noticed that there were no complaints of rot until we began experiencing great diurnal ranges of temperature.

If this is the cause, grapes grown on arbors, must, being better protected by the foliage, have suffered less severely, than those grown to post on trellis. It is strongly on my mind that our years of grape-rot are the years in which Boreas rides forth on the North Wind in Summer.

I take the liberty of submitting these views to you as your field of inquiry is much wider than mine and it may be that the germ is sound and will develop for the good of many.

Yours Truly

Edmund Crawshaw,

MISSOURI
GEORGE ENGELMANN

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